

Appl. No. 10/748,830
Amtd. Dated: Nov. 4, 2005
Reply to Office Action of Aug. 24, 2005

REMARKS

Applicant submits that claims 1, 4-6, 8, 10, and 11 are amended hereby; claims 12-14 are added hereby; and claims 2, 3, 7, and 9 are as originally filed.

Newly added claims 12-14 depend from one of claim 8 and claim 11 and are fully supported by the specification (e.g., see claims 9 and 10, as originally filed).

Objection to the Disclosure

Responsive to the objection to the disclosure on the basis of informalities, Applicant has followed the Examiner's instruction and appropriate correction from "micro-lens array" to "micro-mirror array" has been made throughout the specification (i.e., in Paragraphs 0011 and 0013) and the claims, as required. Accordingly, Applicant submits that the disclosure is now in allowable form.

Claim Rejections - 35 USC §112

Claims 4-7, 8-9, 11 are rejected under 35 U.S.C 112, first paragraph, as failing to comply with the enablement requirement.

In response to the rejection to claims 4-7, 8-9, 11 under 35 U.S.C

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112, first paragraph, as failing to comply with the enablement requirement, Applicant traverses the rejection as follows. As set forth by Applicant in the "Background of the Invention" in Paragraph 0002, "it is known that many color projection display devices, a white light source is separated into red, blue and green sub-beams ..." As such, Applicant recognizes in the application as originally filed that various methods for obtaining light of single colors from white light are well understood to those of ordinary skills in the art. The present projection display is concerned mainly about a combination structure between a light source for providing white light and a micro-mirror array adapted for converting the white light into light with single colors for projecting and displaying images with full color. In fact, in the "Summary of the Invention" at Paragraph 0005, Applicant states that "[e]ach micro-mirror functions as a color filter ..." The availability and use of specialty mirrors as a color separation means, in particular, is well known, with a basic explanation of such mirrors even being available in the "Wikipedia" online (http://en.wikipedia.org/wiki/Dichroic_mirror). Accordingly, Applicant submits that one skilled in the art can achieve the claimed projection display, employing micro-mirrors for obtaining red, green and blue light.

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As such, Applicant submits that claims 4-7, 8-9, 11 are sufficiently enabled for one of ordinary skill in the art to make or use and thus are in allowable form.

Claim Rejections - 35 USC §102

Responsive to the rejection of claims 1-2, 8-9, 11 under 35 U.S.C. 102(b) as being anticipated by Yang et al. (U.S. 5,612,814), Applicant has amended claims 1, 8, and 11 and hereby otherwise traverses this rejection. As such, Applicant submits that claims 1, 2, 8, 9, and 11 are now in condition for allowance.

Claim 1, as amended, recites in part:

the micro-mirror unit being configured so as to receive the white light beams incident thereupon, the white light beams having been emitted directly from the light source without being reflected . . .

Applicant submits that such a color projection display as set forth in claim 1 is neither taught, disclosed, nor suggested by Yang '814 or any of the other cited references, taken alone or in combination.

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Applicant acknowledges that Yang discloses DMD image projection device including a light source 10 and a micro-mirror unit 250. However, Yang employs a series of optical elements 20, 24, 30, 210, and 220 between the light source and the micro-mirror unit 250. As such, Yang clearly does not disclose or suggest that the white light thereof is able to directly impinge upon the micro-mirror unit 250. Further, one of ordinary skill in the art would be lead to believe that the optical elements 20, 24, 30, 210, and 220 together would contribute to a loss in intensity of the white light prior to finally reaching the micro-mirror unit 250.

Further, Yang discloses an optical means 30 for reflecting the white light from the light source 10 (via the light stopper 24) to the array 250 at a predetermined angle. The optical means 30 is also used for transmitting the colored light reflected from the micro-mirror unit 250. Even though Yang refers to the optical means 30 as a "total reflection mirror", such a design would realistically have to be expected to attenuate the light received thereby some amount and thereby disadvantageously consume light intensity. In other words, when it is used for reflecting, it surely has a part of light transmitted therethrough, and when it is used for

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transmitting, it assuredly also has a part of light reflected thereby.

The setup of Yang, as such, is not at all like the present projection display, as set forth in claim 1, in which the system is configured such that the white beams are directly incident upon the micro-mirror unit without having been previously reflected. With respect to the optical transmitting path, the present projection display, as presented in claim 1, as amended, is different from Yang's invention and advantageously overcomes the undue potential for optical loss existing in Yang's device. Therefore the present projection device of claim 1, as amended, should not be considered as being anticipated by Yang nor as being rendered obvious thereby. In fact, Applicant submits that the principle of operation (MPEP §2143.02) of Yang would have to be altered in order for Yang to be modified to read upon the present projection display, as presented in claim 1, as amended.

In a similar manner, claim 8, as amended, recites in part:

a micro-mirror array comprising a red micro-mirror, a green micro-mirror, and a blue micro-mirror, each micro-mirror functioning as a color filter and ~~capable of~~ being configured

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for receiving and reflecting the light beams directly emitted
from the light source ...

Likewise, claim 11, as amended, recites in part:

a micro-mirror array ~~including~~ comprising at least three
micro-mirrors, each characterized with one single original
color, and functioning as a color filter and being ~~capable of~~
configured for receiving and reflecting the light beams
directly emitted from the light source ...

Applicant submits that such a color projection display as set forth in each
of claims 8 and 11 is neither taught, disclosed, nor suggested by Yang
'814 or any of the other cited references, taken alone or in combination.
As set forth in the arguments with respect to claim 1, Yang does not
disclose or suggest micro-mirrors that are configured for receiving light
beams directly from the light source, as required in each of amended
claims 8 and 11.

Accordingly, claims 1, 8 and 11 are submitted to be novel,
unobvious, and patentable over Yang. Reconsideration and withdrawal
of the rejection and allowance of claims 1, 8, and 11 are respectfully

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requested. Claims 2 and 9 depend from claim 1 and 8, respectively, and therefore should also be allowable.

Claim Rejections - 35 USC §103

Claims 3-7, 10 are rejected under 35 U.S.C 103(a) as being unpatentable over Yang in view of Hornbeck (5,583,688)

Claims 3-7 depends from claim 1, and therefore should also be allowable.

Claim 10 depends from claim 8, and therefore should also be allowable.

New added claims

Claims 12 and 13 are added hereby. Claims 12 and 13 depend from claim 11, which is in condition for allowance for the reasons set forth above. Accordingly, Applicant submits that claim 12 and 13 is now in condition for allowance, the allowance of which is hereby respectfully requested.

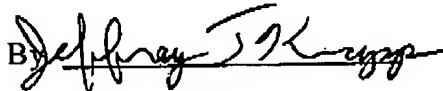
Claim 14 is added hereby. Claim 14 depends from claim 8, which is in condition for allowance for the reasons set forth above.

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Accordingly, Applicant submits that claim 14 is now in condition for allowance, the allowance of which is hereby respectfully requested.

In view of the foregoing, Applicant submits that the present application is now in condition for allowance, and an action to such effect is earnestly solicited.

Respectfully submitted,
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